

Claims

1. A process for the continuous preparation of a silane of the formula I



which comprises continuously reacting a silane of the formula II



with an alkene of the formula III



in the presence of an iridium compound of the formula IV as catalyst



and free diene as cocatalyst, where

R^1 , R^2 , R^3 are each a monovalent Si-C-bonded, unsubstituted or halogen-substituted $\text{C}_1\text{-C}_{18}$ -hydrocarbon radical, a chlorine atom or a $\text{C}_1\text{-C}_{18}$ -alkoxy radical,

R^4 , R^5 , R^6 are each a hydrogen atom, a monovalent $\text{C}_1\text{-C}_{18}$ -hydrocarbon radical which may be unsubstituted or bear F, Cl, OR, NR'_2 , CN or NCO atoms/groups as substituents, a chlorine atom, a fluorine atom or a $\text{C}_1\text{-C}_{18}$ -alkoxy radical, where in each case 2 radicals R^4 , R^5 , R^6 together with the carbon atoms to which they are bound may form a cyclic radical,

R is a hydrogen atom or a monovalent $\text{C}_1\text{-C}_{18}$ -

hydrocarbon radical and diene is a C₄-C₅₀-hydrocarbon compound which may be unsubstituted or bear F, Cl, OR, NR₂, CN or NCO atoms/groups as substituents and has at least two ethylenic C=C double bonds, with the reaction temperature being 30-200°C and the reaction pressure being 0.11-50.0 Mpa.

2. The process as claimed in claim 1, wherein R¹, R² and R³ are C₁-C₆-alkyl radicals or C₁-C₆-alkoxy radicals.
3. The process as claimed in claim 1 or 2, wherein R⁵, R⁶ are C₁-C₆-alkyl radicals or C₁-C₆-alkoxy radicals.
4. The process as claimed in any of claims 1 to 3, wherein R⁴ is selected from among the radicals hydrogen, methyl, ethyl.
5. The process as claimed in any of claims 1 to 4, wherein diene is added as cocatalyst in a concentration of from 1×10⁻⁶ to 1 mol%, based on the silane component of the formula II.
6. The process as claimed in any of claims 1 to 4, wherein the reaction temperature is 60-100°C.
7. The process as claimed in any of claims 1 to 6, wherein the catalyst of the formula IV used is [(cycloocta-1c,5c-diene)IrCl]₂.
8. The process as claimed in any of claims 1 to 7, wherein the cocatalyst used is 1,5-cyclooctadiene.